ETAPS DAILY

Tuesday | Tool demonstrations | Tutorial

Main Conferences Time Table

900 -1000 : invited talks

1000 -1030 : coffee break

1030 -1230: parallel sessions

1230-1400: lunch

1400-1600: parallel sessions

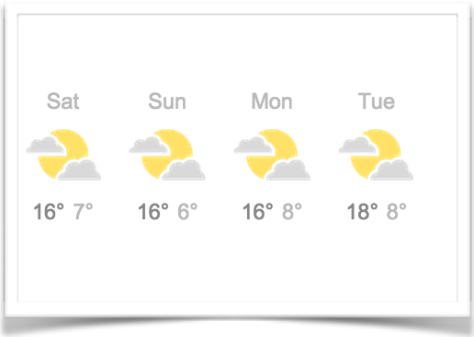
1600-1630: coffee break

1630-1800: parallel sessions

What's on today

Tutorial Florent Kirchner (CEA, France). Keep calm and Verify your Software: an Overview of the Frama-C Platform.

Abstract: Frama-C is a source code analysis platform developed at CEA and Inria. The tool's unique feature is its ability to perform verification by orchestrating various static and dynamic analysis techniques, including deductive verification, value analysis, and runtime assertion checking. Frama-C's open and modular architecture enables the development of new analyses by a growing community of developers, some of which have been successfully deployed in industry and used to verify a range of different applications. This tutorial will include a discussion of the context and issues, a presentation of the current main analysis capabilities within the platform, and illustrations through concrete examples of C programs verifications.



EastEnders

Tommy Flowers was born in London's East End on 22 December 1905, the son of a bricklayer. After an apprenticeship in mechanical engineering, he earned a degree in electrical engineering at the University of London. In 1926, he joined the telecommunications branch of the General Post Office (GPO), exploring the use of electronics for telephone exchanges. By 1939, he was convinced that an all-electronic system was possible. This background in switching electronics would prove crucial for his computer design in World War II.

He worked for the Post Office (GPO) during the war and when the Enigma Encrypting machine turned up at Bletchley. It is said that he told the Top Brass in 1943 that he could build a machine (The Colossus) to decrypt the Enigma. When asked how long it would take to build, Flowers estimated a year. The Top Brass laughed and said "the war will be well and truly over by then... it's not worth the effort!"

So sure of his own capabilities and the capabilities of the Colossus, he set about building one anyway - using mostly his own money in only 11 months!!! It has been said that Tommy Flowers "single-handedly" shortened the war by several years with the build of his code-breaking machine.

After the war, Flowers was awarded only an MBE the lowest decoration he could have been given... and £1,000. This government payment did not even cover his personal investment in the Colossus.

source: computinghistory.org.uk

Invited Talk: Daniel Licata (Wesleyan University, USA). Verification and Parallelism in Introductory Computer Science

Abstract: A few years ago, Carnegie Mellon University revised its core computer science courses to include more material on software verification and parallelism earlier in the introductory sequence. An imperative programming course, designed by Frank Pfenning and collaborators, teaches students to use contracts to reason about the behavior of their code. A functional programming course, designed by Robert Harper and me and collaborators, teaches students to use language-based cost semantics to think about the parallel efficiency of their code. A parallel algorithms course, designed by Guy Blelloch and collaborators, teaches students how to formulate and solve problems in ways that take advantage of parallelism. In this talk, I will describe the goals and principles of this curriculum, and show some examples of how these topics are integrated. In addition to teaching the functional programming course as a postdoc at CMU, I have taught the imperative and functional programming courses at my school, Wesleyan University, and I will report on my experience with teaching this material in a different context. Overall, I believe the courses give students a strong foundation in programming and in reasoning about the behavior and efficiency of their code.

Also Today the TACAS Tool demonstrations (Great Hall 1400-16150) and the TACAS tool demo market in the Octagon 1645-1800.